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LOS ANGELES FIRE DEPARTMENT



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FIRE CHIEF

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BOARD OF FIRE COMMISSIONERS
FILE NO. 13-069R

TO: Board of Fire Commissioners

FROM: Brian L. Cummings, Fire Chief

SUBJECT: AMBULANCE AUGMENTATION STAFFING RECONFIGURATION

FOR INFORMATION ONLY:	☐ Approved	☐ Approved w/Corrections	☐ Withdrawn
	☐ Denied	☐ Received & Filed	☐ Other

For Information Only

The Los Angeles Fire Department (LAFD) is committed to maintaining public safety, firefighter safety, and effective service delivery. The Department accomplishes these priorities within the allocated budget while continuing to advocate for additional resources. The Department must also balance many competing interests to effectively deploy the most appropriate resources to match the type and frequency of requests for service.

On May 5, 2013, the LAFD implemented the Ambulance Augmentation Staffing Reconfiguration (AASR) to improve overall safety, service delivery, and emergency responsiveness. This improved public service deployment augmented the previous complement of 34 basic life support (BLS)¹ ambulances with 11 additional BLS ambulances, representing a 32% increase that raised the current deployment of 24-hour BLS ambulances to 45.

The AASR maintains the current number of LAFD "all-risk"² fire suppression resources. In effect, 22 of 41 light force resources were reconfigured to provide staffing for 11 new

¹ "Basic life support" means emergency first aid and cardiopulmonary resuscitation procedures which, as a minimum, include recognizing respiratory and cardiac arrest and starting the proper application of cardiopulmonary resuscitation to maintain life without invasive techniques until the victim may be transported or until advanced life support is available (1797.6 Health and Safety code). LAFD BLS ambulances are equipped with Automatic External Defibrillators (A.E.D.)

² "All-risk" is a term used to describe the scope of incident types and capabilities required to address the wide range of public safety incident types common to Los Angeles, including but not limited to EMS, and Firefighting.

BLS ambulances. Specifically, one position from each of 22 light forces was transferred to a BLS ambulance position, causing staffing levels on those 22 light forces to be reduced from six personnel to five. (See Attachment 1)

LAFD medical service requests increased 18% between Fiscal Year 2000/2001 and Fiscal Year 2011/2012. In 2012 alone, the LAFD dispatched resources to 333,332 emergency medical incidents. These incidents resulted in 208,209 ambulance transports which equates to 569 transports each day. Consistent with these trends, LAFD emergency medical services are projected to surpass 400,000 per year by 2014, and data analysis provides no evidence of future declines.

Several alternatives to the AASR were discussed and evaluated. Each of these strategies sought to improve public service, increase resource availability, and reduce emergency response times. (See Attachment 2)

The compelling factor in selecting Fire Stations 1, 20, 35, 50, 69, 73, 74, 75, 78, 92, and 96 was that these 11 fire stations represent the only locations where a light force was the sole all-risk fire suppression resource. This reconfiguration was implemented to increase the availability of the Department's most versatile all-risk fire suppression resource. Additionally the AASR will increase the availability of Advanced Life Support (ALS)³

At the direction of the Fire Chief, The Fire Department's Deployment Committee (FDDC), under the leadership of Deputy Chief Mario Rueda selected the resources to participate in the AASR. The FDDC, utilizing experience, training, and professional judgment, reviewed data and other measurements: dynamic deployment of resources, the practice of shifting resources to accommodate training and district hazards. The individual district call load and individual response history data sets are objective and easily compared against one another as follows:

- Workload (number of responses)
- Response times for fire and rescue resources in individual fire station districts (ALS/BLS RA's, trucks, engines)
- Multiple call frequency⁴
- Concentration of resources (proximity of different apparatus)
- Type of responses (ALS vs. BLS vs. all risk incidents)

³ "Advanced life support" means special services designed to provide pre-hospital emergency medical care, including but not limited to, cardiopulmonary resuscitation, cardiac monitoring, cardiac defibrillation, advanced airway management, intravenous therapy, administration of specific drugs and other medical preparations, and other specific techniques and procedures administered by authorized personnel under the direct supervision of a base hospital's part of the local EMS system at the scene of an emergency, during transport to an acute care hospital, during inter-facility transfer, and while in an emergency department of an acute care hospital until responsibility is assumed by the emergency or other medical staff of the hospital. (1797.5 Health and Safety Code)

⁴ Multiple call frequency refers to a resource being on a call in their district when another response comes in. A company from another district must come in to handle the call from a longer distance

- Response distances
- District Risks (special hazards, brush, high density, high rise, etc.)
- Specialty Resources (hazardous materials, US&R Task Forces)

The AASR maintains an all-risk foundation that improves public safety by appropriately addressing rising EMS demands which are approaching 85% of all LAFD service requests. The addition of 11 BLS ambulances produces a more relevant public service model due to the fact that the LAFD complement of 134 ambulances; 89 ALS and 45 BLS, are now more closely patterned to match LAFD capabilities with community needs.

For example, 64% of LAFD EMS service requests require an ALS response, and 66% of the Department's ambulances are ALS. Additionally, 36% of the Department's EMS service requests require a BLS response, and with AASR, 34% of Department ambulances are BLS. This more appropriately aligns the LAFD public service model with contemporary public service needs.

The AASR was implemented to accomplish the following:

- Improve public safety
- Maintain firefighter safety
- Improve advanced life support service delivery
- Improve basic life support service delivery
- Maintain staffing levels consistent with NFPA standards
- Increase overall capacity of the emergency response system

The implementation plan for the AASR addressed issues concerning staffing reconfiguration. The issues addressed included personnel reduction in staffing on light forces, apparatus maintenance costs, and the logistics of deploying 11 additional ambulances. The Employee Relations Officer met with respective labor organization representatives to work through personnel issues relative to the transfer of personnel. The reduction of staffing on light forces was addressed by ensuring that an effective response force is dispatched to every incident. The maintenance costs associated with 11 additional ambulances are more than offset by reduced wear on 11 aerial ladder trucks and 11 engines. All logistical concerns associated with equipping, housing, and deploying these ambulances and their staffing were thoroughly addressed by the Supply and Maintenance staff.

Also to assist the Metropolitan Fire Communications (MFC) Floor Captains with managing their high workload and ensure the readiness of the LAFD Rescue Ambulance fleet, an Ambulance Control Officer (ACO) position has been operating on a trial basis that began on May 15, 2013. This Officer's objective is to balance ambulance coverage throughout the City by managing ambulance status, move-ups, response times, and availability.

Firefighter safety is of the utmost importance in everything we do. From the lower level call to the most complicated, safety is first and foremost. The LAFD's risk vs. gain philosophy, command experience, training and resource capacity allow us to effectively and safely mitigate whatever issues are encountered on scene. As a means to optimize public and firefighter safety, the LAFD will continue to dispatch effective response forces that are comprised of the appropriate resources, apparatus and personnel that either meet or exceed national, regional, or local standards.

One of the most important issues adopted by the National Fire Protection Association (NFPA)⁵ was personnel accountability at the scene of emergencies. The LAFD has developed firefighter emergency guidelines and incorporated accountability into the Incident Command System to ensure compliance with NFPA standards.

NFPA standards 1500 and 1561 contain specific requirements regarding safety and accountability of members.

NFPA standard 1500 specifies safety requirements for those members involved in rescue, fire suppression, emergency medical services, hazardous materials operations, special operation, and related activities.

It also specifies that the authority having jurisdiction shall identify which performance objectives of this standard existing programs meet.

NFPA standard 1561 contains the minimum requirements relating to the organization, operation, and deployment of fire suppression operations, emergency medical services operations, and special operation by career fire departments. It contains general requirements for managing resources and systems, such as health and safety incident management, training communication, and pre-incident planning.

NFPA standard 1710 establishes minimum requirements relating to the organization, operation, and deployment of fire suppression operations, medical services operations, and special operation by career fire departments. It contains general requirements for managing resources and systems, such as health and safety incident management, training, communications, and pre-incident planning.

NFPA standard 1710 also establishes the following:

- "The Fire Department shall identify minimum company staffing levels as necessary to meet the deployment criteria required to ensure that a sufficient number of members are assigned, on duty, and available to safely and effectively respond with each company."

⁵ The National Fire Protection Association is a United States trade association that creates and maintains private, copyrighted, standards and codes for usage and adoption by local governments. This includes publications from model building codes to the many on equipment utilized by firefighters while engaging in hazardous material response, rescue response, and firefighting.

- In jurisdictions with tactical hazards, high hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the Authority Having Jurisdiction (AHJ), truck companies shall be staffed with a minimum of five or six members.

The LAFD clearly meets or exceeds the aforementioned NFPA recommendations with the five-member staffing on the light force. For several years, the Department operated with five and six member light force configurations. Most significantly, on September 2, 1997, the Department reduced staffing from six members to five members on 34 light force resources. This configuration remained in place for a nearly nine-year period until April 30, 2006, at which time the sixth member was restored to the remaining five member light force resources.

Department policy delineated in LAFD Training Bulletin No. 76, "Company Operations", addresses the safe, effective, operational deployment of five-member light force operations, and reinforces NFPA standard 1710 relative to staffing. In accordance with Training Bulletin No. 76 and standard operating guidelines, the commander of a five-member light force shall determine whether to act only as a truck or engine company upon arrival at an incident. Safe operations are facilitated with the mandate that deviation from company unity is not permitted. (See Attachment 3)

The LAFD, with support from the Mayor, City Council, and Board of Fire Commissioners is in the process of initiating "FIRESTATLA". This data driven performance and accountability system is designed to provide technologically innovative management techniques to enhance department performance. "FirstWatch" is a software application that provides decision-makers the ability to capitalize on the identification of positive trends that may be enhanced or negative trends that may be mitigated, or improved.

The Fire Chief identified six measures of success. The measures will be used to evaluate the effectiveness of the AASR:

1. Response times, patient care, and patient transportation
2. EMS responses by light forces
3. Light force availability
4. Ambulance availability
5. Number of ALS transports of BLS patients
6. Light force coverage throughout City

Ultimately, the LAFD resource footprint must be matched to the type and frequency of service requests. This process is based on sound scrutiny of key performance indicators, data analysis, and emergency service trends that will provide the platform to achieve the needed public service model.

Although implemented for only a brief period, (5/5-5/29/13) AASR has shown the following favorable results:

1. Improved coverage of emergency medical calls, as more resources are available;
2. Increased availability of light force resources to respond to all-risk incidents;
3. Increased availability of ALS rescue ambulances for more urgent EMS calls.

Here is a comparison of EMS responses for the Light Forces that received a BLS RA during 2012 as compared to the 25 day period since May 5th.

Company	Daily Average		Daily Availability	
	2012	5-05-13 to 5-29-13	2012	5-05-13 to 5-29-13
LF 73	9.8	7.2	88%	93%
LF 92	8.9	7.1	89%	91%
LF 75	8.7	7.4	90%	93%
LF 20	8.6	5.7	90%	93%
LF 35	8.3	7.3	90%	91%
LF 1	7.7	5.2	90%	93%
LF 78	7.2	4.8	90%	94%
LF 96	6.2	4.4	91%	93%
LF 74	5.5	5.2	92%	92%
LF 50	4.6	4.1	94%	94%
LF 69	2.9	2.6	96%	97%
Average:	7.1	5.6	91%	93%

This data was obtained through Management Information System (MIS) reports.

In support of the AASR, the LAFD's Medical Director, Dr. Marc Eckstein has stated "We can no longer do business the same way just because this is the way we have always done it. Budgetary constraints and the rapidly changing healthcare system are now forcing us to make changes. If the fire service does not adapt to the changing healthcare system it will become a peripheral player/first responder. Change is never easy, but for those organizations that fail to change and adapt, they will get left behind and become extinct."

Dr. Eckstein offers this anecdotal story: "I responded to a physical rescue traffic this week in Fire Station 1's first in district. As it turned out, LF 1 was available to respond and extricate the patient from his mangled vehicle with no delay because BLS Rescue 801 had just been dispatched to a non-emergency ground level fall. Were it not for RA 801, LF 1 would have been tied up on the non-emergency EMS call and not been available for the extrication. The plan works, but there is no better argument than real data."

While the LAFD analyses data daily, a quarterly report will be delivered to the Fire Commission. LAFD's goal is to improve public safety and service, firefighter safety and to acknowledge national, state, regional, and industry standards as it constantly evolves to meet public service demands. Consequently, the LAFD is exploring Systems Status Management⁶ processes that provide tangible metrics for success. These technological advances provide the ability to employ dynamic deployment models where continual review of current operation, reevaluation of changing community needs, and the development of contemporary, relevant redeployments become the norm.

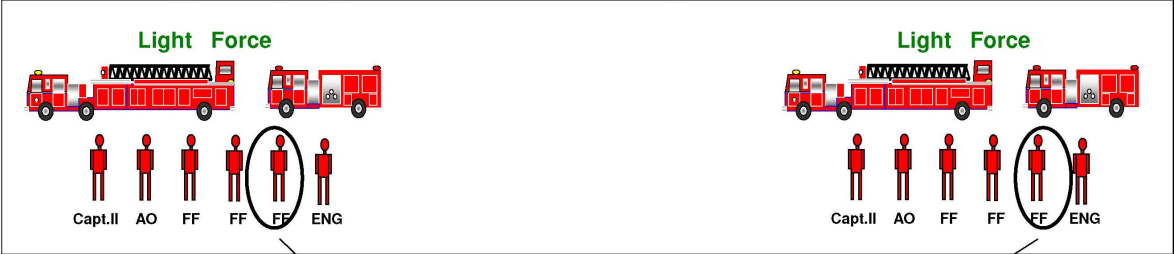
Board Report prepared by Planning Section.

Attachments (3)

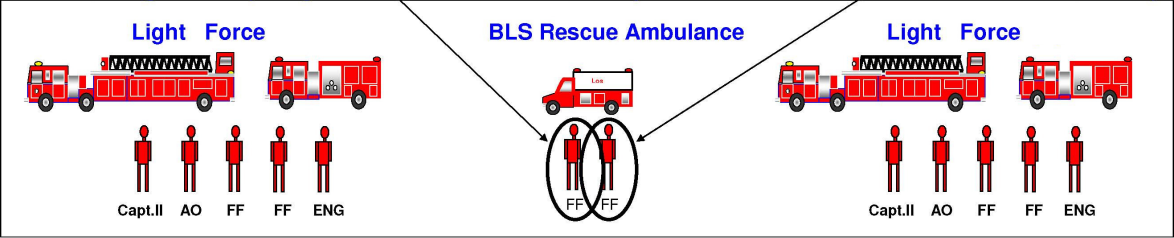
⁶ Systems Status Management (SSM) is the deployment of ambulances based on the hour-of-the-day and day-of-the-week in order to match supply, defined as unit hours of utilization (UHU), with unexpected demand, expressed as calls for service, to provide faster response.

Ambulance Augmentation Staffing Reconfiguration

Prior to Reconfiguration (41 Light Forces staffed with 6 members)



Post Reconfiguration (19 Light Forces with 6 members, 22 Light Forces with 5 members and 11 BLS Ambulances)



Alternatives to Ambulance Augmentation Staffing Configuration

There were several alternatives to AASR that were discussed and evaluated. These strategies were designed to reduce response times and increase rescue ambulance availability. Each also had drawbacks that had potential impact to public and firefighter safety. They are listed by ease of implementation and represent BLS staffing options only.

Reduce Unavailable (CAV) Training Assignments for RA Personnel

Starting July 1, 2013 this number will be reduced to a total of eight RA's. This change could be advanced immediately. This provides for eight additional RA's each day available to the system. Current Department policy permits up to 16 Rescue Ambulance to be placed Conditionally Available (CAV) for training purposes. **This model was eliminated because training is lessened and may lead to diminished service levels.**

Flex Staffing Truck Companies with Ready Reserve Ambulances

Flex Staffing truck companies can be accomplished two ways; the first, during predictable high incident hours those personnel assigned to the truck will respond as an Engine company and a BLS rescue. The truck apparatus will be in a standby position. **The drawback on this configuration is that it reduces the available Truck companies available in the system during peak EMS workload hours.** The second method is based on type of dispatch. When a medical dispatch is received in a Task Force or Light Force fire station that has a ready reserve ambulance, the light force can respond as a BLS rescue or as an engine company alone or together depending on the incident. In this configuration, truck availability is reduced only during those times they would otherwise be committed to an EMS call for service.

Eliminate Engines (pumps) from Light Forces

A light force consists of 2 apparatus, a truck and an engine. Engines that are part of a light force (pumps) provide a tremendous amount of flexibility to the Department's fire suppression capability. They also provide immediate surge of engine companies in the event of a wildland fire. This deployment model closes the pump and redeploys the dispatched staffing to RA's. **This model was eliminated because the light forces would not be able to provide water at the scene of an emergency.**

Reassignment underutilized Resources from Other Areas of the City

Reassigning resources is always a consideration. The permanent movement of resources should coincide with the relevant data available. Daily, temporary repositioning of resources during typical and predictable workload is also a consideration. **This model was eliminated because the area of the City the resource is removed from would then have fewer resources to respond.**

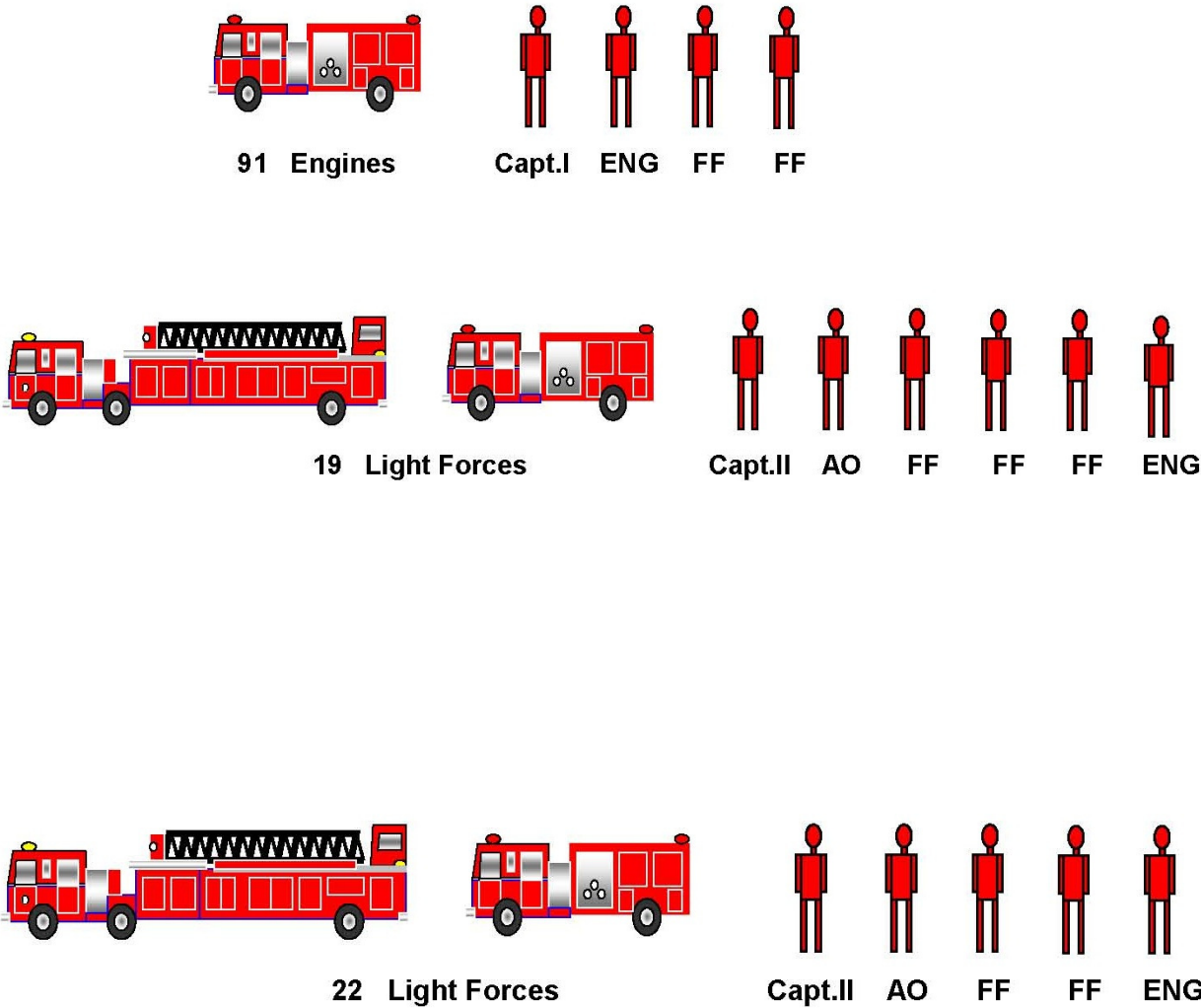
Schedule Changes

This deployment model would involve having fewer resources on a 24-hour platoon basis and deployed additional resources during typical and predictable workload hours. **A portion of Fire Department workload is unpredictable. This strategy has potential public and firefighter safety impacts.**

Implement Entry Level Employee Basic Life Support RA's

This model entails putting entry level BLS non-sworn employees on RA's to augment the staffing of the transport resources. In order to improve response times, **this program would require additional funding.**

Current Fire Suppression Staffing



Staffing will be either a five member Truck Company or a five member Engine Company

